

Notice of Allowability

Application No.

09/931,656

Examiner

Phirin Sam

Applicant(s)

NIU, ZHISHENG

Art Unit

2661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 06/09/2005.
2. ☒ The allowed claim(s) is/are 1-15.
3. ☐ The drawings filed on _____ are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

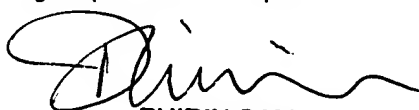
* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☒ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date 03/30/2005.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____



PHIRIN SAM
PRIMARY EXAMINER

DETAILED ACTION

Drawings

1. The application having been allowed, formal drawings are required in response to this Office action.

Allowable Subject Matter

2. The following is an examiner's statement of reasons for allowance:

Regarding amended claims 1-12, prior arts do not disclose a TCP local retransmission scheme, used in an unreliable network, comprising a combination of:

- (1) an access point of an unreliable link, detecting whether there is data packet loss based on the time-stamp of a first local sequence number, stored in said access point, said acknowledgment number (AN) and said time-stamp of a second local sequence number, wherein both are determined from said acknowledgement packet; and
- (2) if a lost data packet is detected, updating and retransmitting said time-stamp of a first local sequence number in LAC-PDU head, and when congestion loss of the data packet which corresponds to the acknowledgement number (AN) of acknowledgement packet (ACK1) is impossible, said acknowledgement packet (ACK1) along with a marked explicit retransmission feedback (ERN) field is delivered to said Internet TCP source.

Regarding amended claims 13 and 14, the prior arts do not disclose a TCP local retransmission scheme, used in an unreliable network comprised of: transmitting a data packet for a mobile communication system; said mobile communication system, receiving said data packet including sequence number from at least one Internet network and transmitting said data packet to a mobile terminal said transmission method comprising a combination of:

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- (1) transmitting said formatted data packet to said mobile terminal and sending back acknowledgement data from said mobile terminal when said mobile terminal successfully receives transmitted data packet, which includes an acknowledgement number and a time-stamp of second local sequence number corresponding to said time-stamp of a first local sequence number;
- (2) detecting whether said data packet should be retransmitted to said mobile terminal by comparing a buffered sequence number and said time-stamp of a first sequence number associated with said acknowledgement data received from the mobile terminal.

Regarding amended claim 15, the prior arts do not disclose a TCP local retransmission scheme, used in an unreliable network, wherein a method of receiving a data packet from a mobile terminal in a mobile communication system comprising a combination of:

- (1) receiving said data packet formatted in accordance with said mobile communication system, the formatted data packet comprising a time-stamp of a first local sequence number;
- (b) giving a time-stamp of a second local sequence number corresponding to the received time stamp of a first local sequence number; and
- (c) sending back acknowledgment data comprising an acknowledgement number and said given time-stamp of a second local sequence number corresponding to said received time-stamp of a first local sequence number.

Conclusion

3. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue

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fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phirin Sam whose telephone number is (571) 272-3082. The examiner can normally be reached on Mon-Fri, 8:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau T. Nguyen can be reached on (571) 272 - 3126. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Respectfully submitted,

Date: June 12, 2005



PHIRIN SAM
PRIMARY EXAMINER